CLAIMS:

1.   A video coding method for the compression of a bitstream corresponding to an original video sequence that has been divided into successive groups of frames (GOFs) the size of which is $N = 2^n$ with $n = 0$, or 1, or 2,..., said coding method comprising the following steps, applied to each successive GOF of the sequence:

5   a)   a spatio-temporal analysis step, leading to a spatio-temporal multiresolution decomposition of the current GOF into 2^n low and high frequency temporal subbands, said step itself comprising the following sub-steps:

-          a motion estimation sub-step;

-          based on said motion estimation, a motion compensated temporal
10   filtering sub-step, performed on each of the 2^{n-1} couples of frames of the current GOF;

-          a spatial analysis sub-step, performed on the subbands resulting from said filtering sub-step;

b)   an encoding step, performed on said low and high frequency temporal subbands resulting from the spatio-temporal analysis step and on motion vectors obtained by
15   means of said motion estimation step;

said coding method being further characterized in that said spatio-temporal analysis step also comprises a decision sub-step for activating or not the motion estimation sub-step, said decision sub-step itself comprising a motion activity pre-analysis operation based on the MPEG-7 Motion Activity descriptors and performed on the input frames or
20   subbands to be motion compensated and temporally filtered.

2.   A coding method according to claim 1, said decision sub-step being based on the *Intensity of activity* attribute of the MPEG-7 Motion Activity Descriptors for all the frames or subbands of the current temporal decomposition level and comprising the
25   following operations:

1)   for a specific temporal decomposition level:

a)   perform ME between each couple of frames (or subbands) that compose this level:

-          for each couple:

-    compute the standard deviation of motion vector magnitude;

-    compute the Activity value.

b)   compute the average Activity Intensity I(av):

- if I(av) is equal to 5 (value corresponding to "very high intensity"), it is decided to deactivate ME for respectively the current temporal decomposition level and the following levels as well;

- if I(av) is strictly below 5, it is decided to activate ME for the current temporal decomposition level.

2)   go to the next temporal decomposition level.

3.   A video coding device for the compression of a bitstream corresponding to an original video sequence that has been divided into successive groups of frames (GOFs) the size of which is $N = 2^n$ with $n = 0$, or 1, or 2,..., said coding device comprising the following elements:

a)   spatio-temporal analysis means, applied to each successive GOF of the sequence and leading to a spatio-temporal multiresolution decomposition of the current GOF into 2^n low and high frequency temporal subbands, said analysis means themselves comprising the following circuits:

- a motion estimation circuit;

- based on the result of said motion estimation, a motion compensated temporal filtering circuit, applied to each of the 2^{n-1} couples of frames of the current GOF;

- a spatial analysis circuit, applied to the subbands delivered by said temporal filtering circuit;

b)   encoding means, applied to the low and high frequency temporal subbands delivered by said spatio-temporal analysis means and to motion vectors delivered by said motion estimation circuit;

said coding device being further characterized in that said spatio-temporal analysis means also comprise a decision circuit for activating or not the motion estimation circuit, said decision circuit itself comprising a motion activity pre-analysis stage, using the MPEG-7 Motion Activity descriptors and applied to the input frames or subbands to be motion compensated and temporally filtered.